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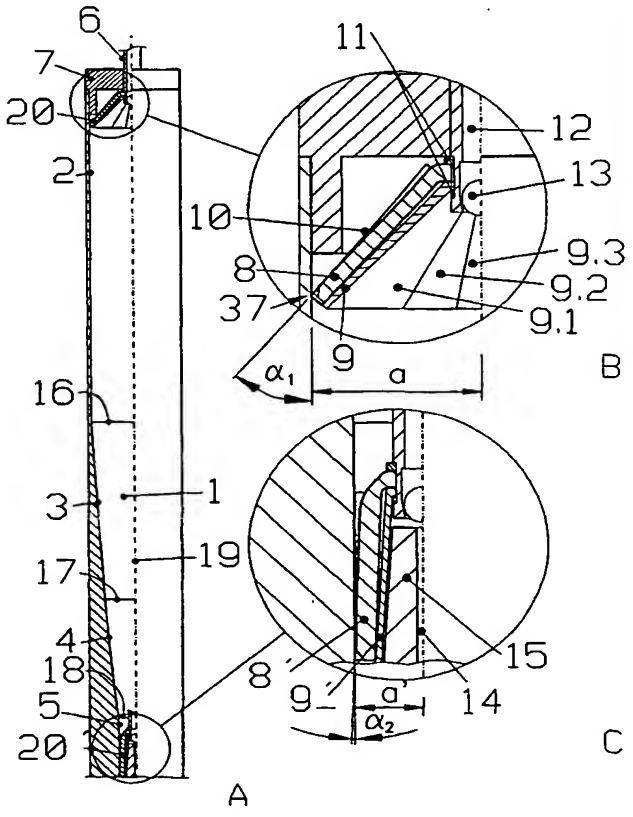
(54) Title: A COMBINATION OF A CHAMBER AND A PISTON, A PUMP, A MOTOR, A SHOCK ABSORBER AND A TRANSDUCER INCORPORATING THE COMBINATION

(57) Abstract

A combination of a piston and a chamber, wherein the chamber defines an elongate chamber having a longitudinal axis, the chamber having, at a first longitudinal position thereof, a first cross–sectional area thereof and, at a second longitudinal position thereof, a second cross–sectional area, the second cross–sectional area being 95% or less of the first cross–sectional area, the change in cross–section of the chamber being at least substantially continuous between the first and second longitudinal positions, the piston being adapted to adapt itself to the cross–section of the chamber when moving from the first to the second longitudinal position of the chamber. The piston may comprise an umbrella–like support structure or a fibre enforced deformable container comprising a foam or a fluid. The combination may be used in a pump, a linear actuator, a motor, or a shock absorber.